

- Caméra couleur dôme motorisée jour/nuit 3,8-38 mm 10X étanche
3,5-94,5mm 27X étanche / 3,5-129,5mm 37X étanche
- 3.8-38 mm 10X weatherproof / 3.5-94.5 mm 27X weatherproof / 3.5-129.5 mm 37X weatherproof
motorized day/night dome colour camera
- Cámara de cúpula en color motorizada día/noche
3,8-38 mm 10X hermética / 3,5-94,5 mm 27X hermética / 3,5-129,5 mm 37X hermética
- Câmara a cores cúpula motorizada diurna/nocturna
3,8-38 mm 10X estanque / 3,5-94,5 mm 27X estanque / 3,5-129,5 mm 37X estanque
- Kamera kolorowa ze sklepieniem, z napędem, dzień/noc,
3,8-38 mm 10X, wodoszczelna, 3,5-94,5 mm 27X, wodoszczelna, 3,5-129,5 mm 37X, wodoszczelna

430 523/524/525



430 523



User manual

430 524

430 525

FEATURES

• Powerful Zoom Camera & Setup Options

	391715	391716	391716
Optical Zoom	x10	x27	x37
Digital Zoom	x10	x12	x12
Max. zoom magnification	x100	x324	x444
High light compensation	YES	YES	YES
Privacy Mask	4	8	8
Day & Night	YES		
WDR	NO		YES
Focus Mode	Auto-Focus, Manual Focus, Semi-Auto Focus		
OSD Menu	YES		
Image Sensor 1/4" CCD	Sony Interline Transfer CCD	super HAD color CCD	

Powerful Pan/Tilt Functions

- MAX. 360°/sec High Speed Pan/Tilt Motion
- With the Vector Drive Technology, Pan/Tilt motions are accomplished along the shortest path. As a result, the time to target view is remarkably short and the video on the monitor is very natural in monitoring.
- With the Micro-Stepping Control Technology, the video looks very natural at high zoom magnification during a jog operation on a controller since the camera can be controlled by 0.05 /sec. Hence it is very easy to make the camera focus on desired target views at high zoom magnification. Additionally it is easy to make the camera focus on desired positions with zoom-proportional pan/tilt movement.
- **Preset, Pattern, Swing, Group, Privacy Mask and More...**
 - MAX. 127 Presets are programmable and each preset can have its own parameter values independently from the other presets. For an example, refer to the below table.

Preset No.	White Balance	Auto Exposure	...	Label	Remarks
Preset 1	Case A	Case 3		"ENTRANCE"	
Preset 2	Case C	Case 5		"WAREHOUSE"	
Preset 3	Case V	Case 2		"OFFICE"	
...					
Preset 95	-	-	-	-	Reserved for OSD Menu
...					
Preset 128	Case K	Case 9		"TERRACE"	

- MAX. 8 sets of Swing are programmable. This function is that the camera moves repetitively between two preset positions at programmed speeds.
- MAX. 4 Patterns are programmable. This function is that the camera memorizes the path (mostly curve path) by the joystick of the controller and revives the trajectory operated by the joystick as closely as possible.
- MAX. 8 sets of Group are programmable. This function is that the camera memorizes the combination of Presets, Pattern and/or Swings sequently and runs Presets, Pattern and/or Swings repetitively. A Group can be combined upto 20 functions with any of Preset/Pattern/Swing.
- Privacy Masks are programmable, not to intrude on any other's privacy :
391715 : MAX. 4 privacy zones
391716/391717 : 8 privacy zones.

- **PTZ (Pan/Tilt/Zoom) Control**

- With the RS-485 communication connection, MAX. 255 units of cameras can be connected to a single controller.
- Pelco-D or Pelco-P protocols can be selected as a control protocol in the current firmware version.

- **OSD (On Screen Display) Menu**

- OSD menu is provided to display the status of camera and to configure the functions interactively.
- The information such as Camera ID, Pan/Tilt Angle, Direction, Alarm Input and Preset is displayed on screen.

- **Alarm In/Out Function**

- 3 alarm sensor inputs and 1 alarm sensor outputs.
- Alarm sensor input is decoupled with photo-couplers to avoid external electric noise and shock perfectly.
- Both of N.O.(Normal Open) sensors and N.C.(Normal Close) sensors can be used and the signal range of the sensor input is from DC 5.0V to 12.0V for various applications.
- The camera can be set to move to a Preset position or to run functions such as Pattern, Swing and Group when there are external sensor activations. Also "Post Alarm" function is possible, which is supposed to activate after user-defined time period and sequentially in succession to the action by external sensor activations.

- **Reserved Presets (Hot Keys)**

- Most camera setup options can be set up easily and directly with the reserved presets (Hot Keys), without entering into OSD menu. For more information, refer to "Reserved Presets (Hot Keys)".

- **Perfect Outdoor Environment Compatibility and Easy Installation**

- The fans and heaters are built-in in the camera for cold and hot temperature environment. Also idealistic mechanical design protects the camera from water and dust. (IP67 when installed properly with wall mount bracket only)
- It is easy to install the camera.



Warning

- The installation and calibration of this camera must be carried out by highly skilled personnel.
- Do not open the camera: there may be a risk of electric shock.
- Low voltage cameras must be powered by a power supply unit with stabilized voltage.

This range of cameras has been created for CCTV applications and not for other uses.

Use these cameras only for the following temperature conditions: from (-10) – (+50) °C.

Do not use the cameras with voltages different from the ones specified.

Safety instructions

This product should be installed in line with installation rules, preferably by a qualified electrician. Incorrect installation and use can lead to risk of electric shock or fire.

Before carrying out the installation, read the instructions and take account of the product's specific mounting location.

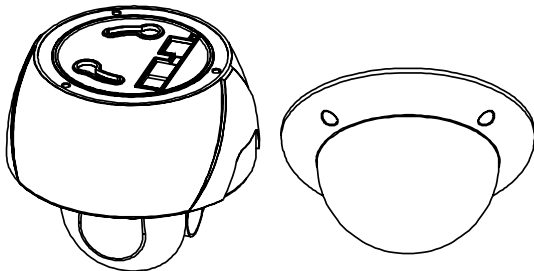
Do not open up, dismantle, alter or modify the device except where specifically required to do so by the instructions. All Legrand products must be opened and repaired exclusively by personnel trained and approved by Legrand. Any unauthorised opening or repair completely cancels all liabilities and the rights to replacement and guarantees.

Use only Legrand brand accessories.

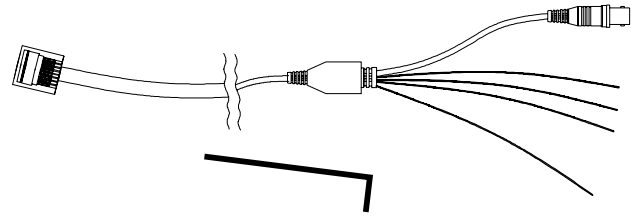


PACKAGE COMPONENT

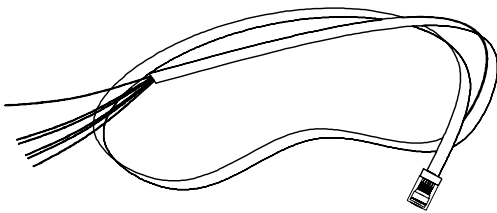
- **Product & Accessories**



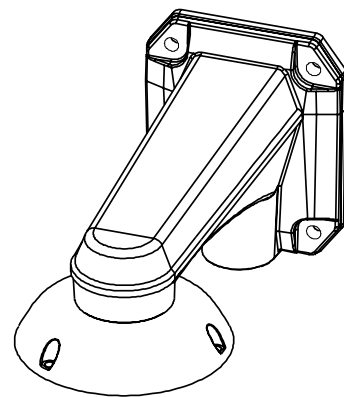
Main Body & Surface Mount Bracket



Default Accessories
[Main Cable, Wrench]

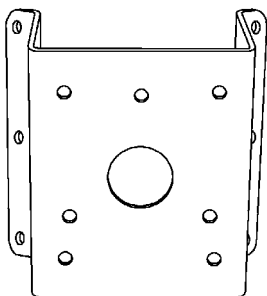


Accessories for The Models with Alarm In/Out Function
[I/O Cable]

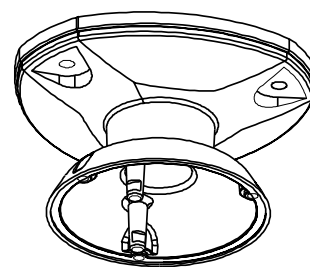


Wall Mount Bracket
[Screws : Machine M5x15, Hex Lag #14x50]

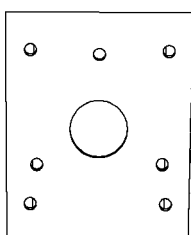
- **Optional Brackets**



Corner bracket 391849

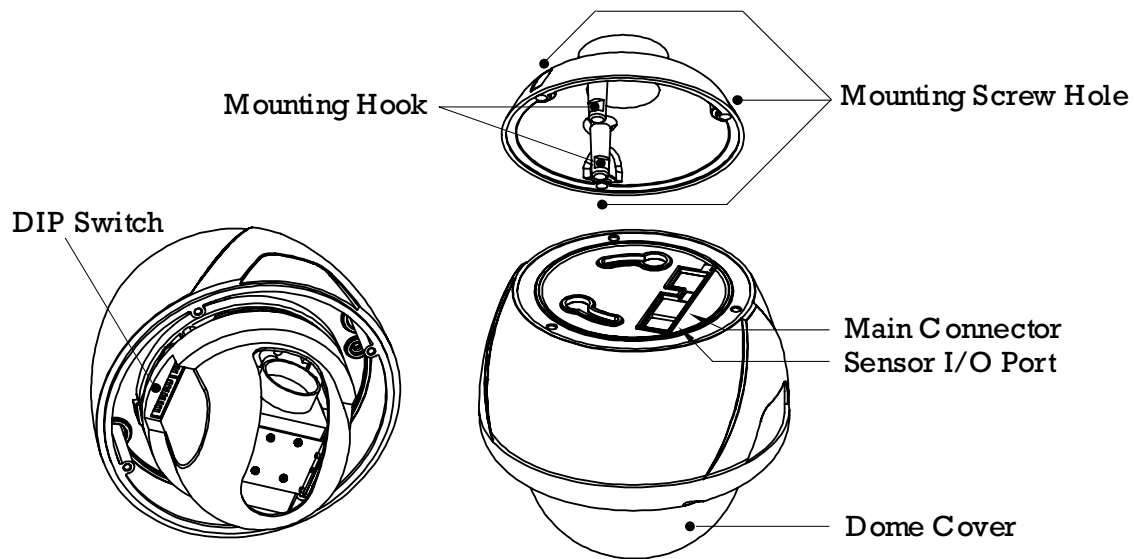


Ceiling Mount Bracket 391848



Pole bracket 391850

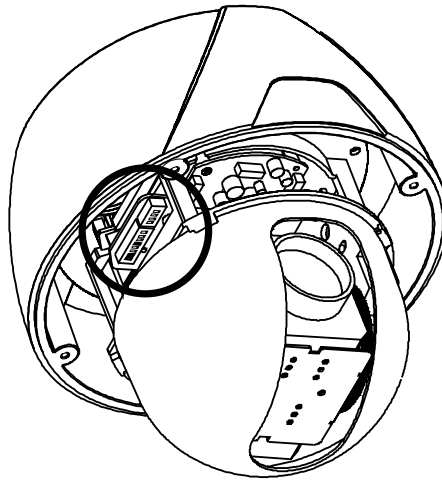
MAIN PART DESCRIPTION



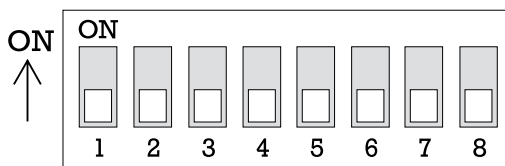
- **Dome Cover**
Do not detach the protection vinyl from the dome cover before finishing all the installation process to protect the dome cover from scratches or dust.
- **DIP Switch**
Used to set up camera IDs and protocols.
- **Dome Cover Lock-up screw**
Used to lock up the dome cover after assembling the dome cover with the main body.
- **Dome Cover Assembly stud**
Used to line up the stud on the main body and the stud on the dome cover when assembling the dome cover with the main body.
- **Surface Mount Bracket & Mounting Screw Hole**
Used for surface mount type, wall mount type and ceiling mount type. They are not used for in-ceiling mount type.
- **Mounting Hook**
Used to assemble the main body with wall mount bracket or ceiling mount bracket. Insert the mounting hooks into the holes on the surface of the main body and turn the main body.
- **Main Connector**
Used for the power wire, the video cable and the RS-485 communication cable connection.
- **Sensor I/O Port**
Used for the sensor in/out connection.

DIP SWITCH SETUP

Before installing the camera, set up the DIP switch to configure the camera ID and the communication protocol.



- **Camera ID Setup**



- DID numbers of cameras are set up with binary numbers. See the examples shown below.

Pin	1	2	3	4	5	6	7	8
Binary Value	1	2	4	8	16	32	64	128
ex: ID = 5	on	off	on	off	off	off	off	off
ex: ID = 10	off	on	off	on	off	off	off	off

- The camera ID range is "1~255". **Camera ID must not be "0"!**
- The factory default of the camera ID is "1".
- Match the camera ID with the Cam ID setting of your DVR or Controller to control the camera.
- If you are connecting a single camera to a controller, terminate the camera. When connecting more than one camera to a single controller, terminate the last camera on the communication line. The last camera means the camera farthest in cable length from the controller.
- Note that the total length of the communication cable between a controller and the camera(s) on the same communication line must be less than 1.2Km.

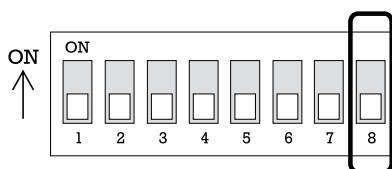
- **Communication Protocol Setup**

- Select an appropriate Protocol with the DIP switch combination.

Switch Mode			Protocol
P0 (Pin 1)	P1 (Pin 2)	P2 (Pin 3)	
OFF	OFF	OFF	PELCO-D, 2400 bps
ON	OFF	OFF	PELCO-D, 9600 bps
OFF	ON	OFF	PELCO-P, 4800 bps
ON	ON	OFF	PELCO-P, 9600 bps
Others			Reserved

- Match the camera protocol with the camera protocol in the setting of your DVR or controller to control the camera.
- Adjust the DIP switch after turning off the camera. If you changed the camera protocol by changing the DIP S/W, the change will be effective after you reboot the camera. The factory default protocol is “Pelco-D, 2400 bps”.

- **Terminal Resistor Setup**



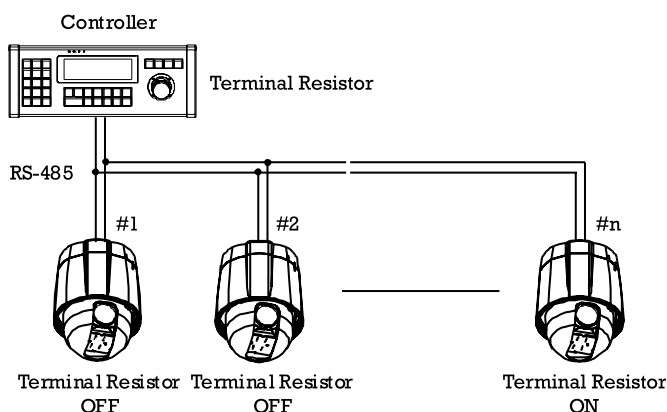
- The terminal resistor is used for the following cases.

- **Case 1 : In case that the control cable length between a camera and a controller is relatively very long (1:1 Connection)**

If the communication cable length is very long, the electrical signal will bound in the terminal point. This reflected signal causes distortion of original signal. Accordingly, the camera can be out of control. In this case, the terminal resistor of both sides i.e. the camera and the controller must be set to 'ON' state.

- **Case 2 : In case that multiple cameras are connected to a controller.**

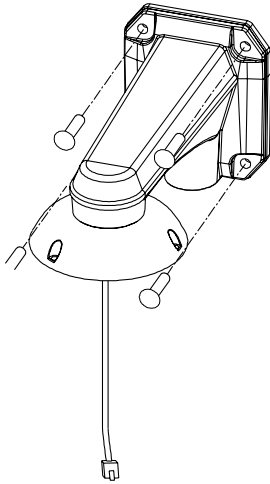
Due to similar reasons with the case 1, the terminal resistor of the controller and the last camera must be set to 'ON' state. The last camera means the camera farthest in cable length from the controller. Do not turn on the terminal resistor of all the cameras on the same communication cable.



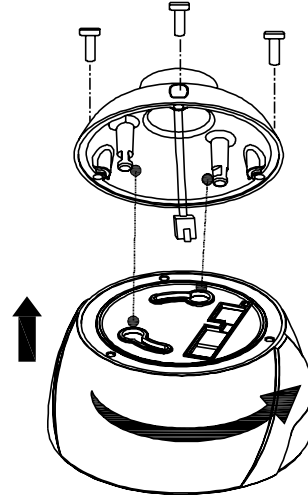
The complete informations are in the manual on the CDrom.

INSTALLATION WITH WALL MOUNT BRACKET

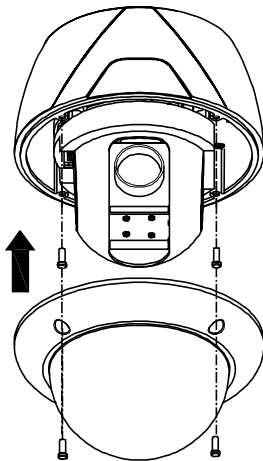
- 1 Make a hole whose diameter is 30~40mm on the mounting surface to pass the wire(s) and cable(s) through the mounting surface.
(In case of the wiring and cabling through the mounting surface only) Then prepare the wall mount bracket. Pull the wire(s) and cable(s) for the system as below. Attach the wall mount bracket to the mounting surface. (Hex Lag #14x50)



- 2 Pull the wire(s) and cable(s) for the system as below. Wire the cable(s) to the ports. Insert the mounting hooks into the holes on the surface of the main body and turn the main body. Assemble the main both with the camera mount adaptor with the 3 screws. (Machine M5x15)



- 3 Screw the dome cover to the main body and remove the protection vinyl from the dome cover.

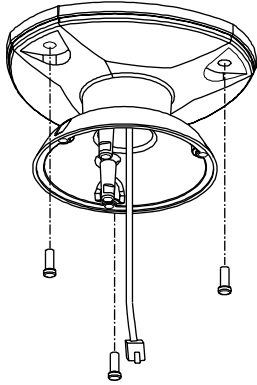


Important Notice

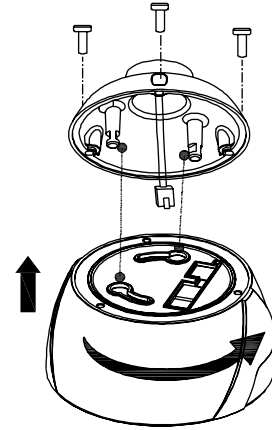
- Before starting the installation, make sure that the Camera ID and Protocol are set up properly.

INSTALLATION WITH CEILING MOUNT BRACKET (391848)

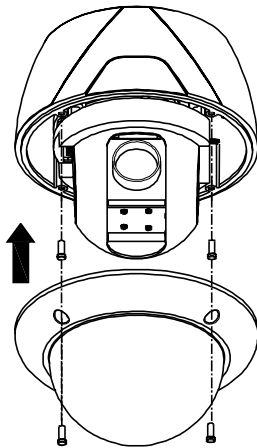
- 1 Remove the ceiling tile from the ceiling and cut a hole whose diameter is 30~40mm on the ceiling tile to pass the wire(s) and cable(s) through to the upside of the ceiling. (In case of the wiring and cabling through the mounting surface only) Then prepare the ceiling mount bracket. Pull the wire(s) for the system as below. (Anchor Bolt 3/8"x70)



- 2 Pull the wire(s) and cable(s) for the system as below. Wire the cable(s) to the ports. Insert the mounting hooks into the holes on the surface of the main body and turn the main body. Assemble the main both with the camera mount adaptor with the 3 screws. (Machine M5x15)



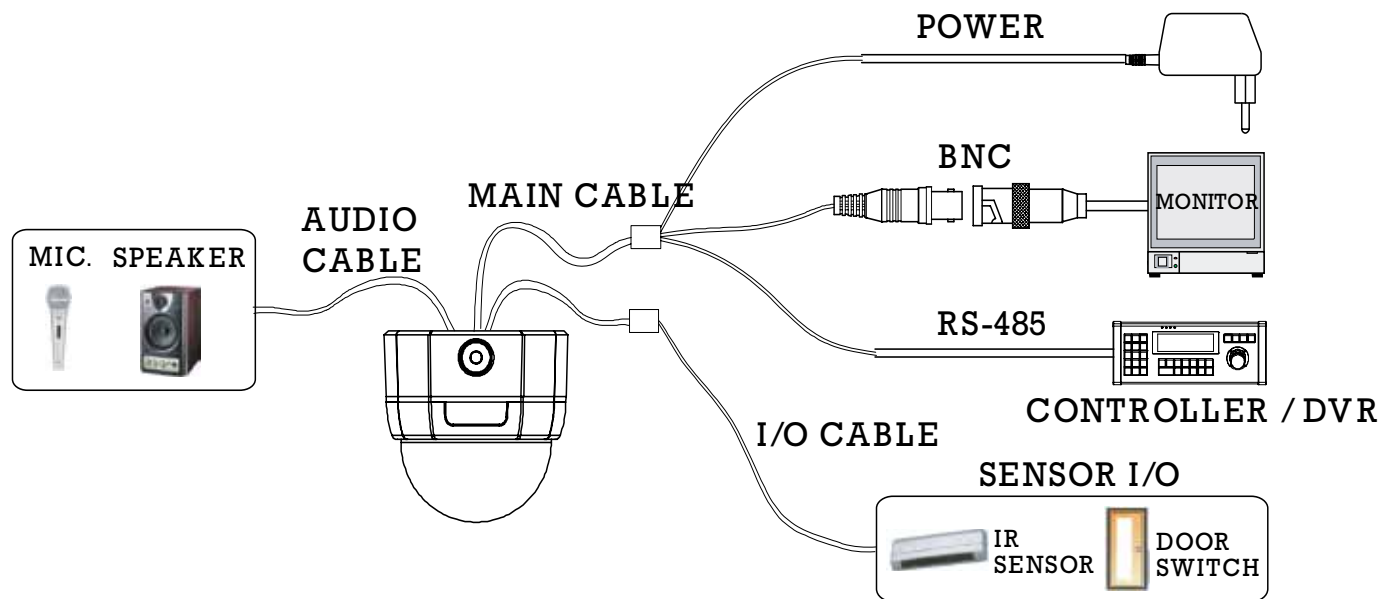
- 3 Screw the dome cover to the main body and remove the protection vinyl from the dome cover.



Important Notice

- Before starting the installation, make sure that the Camera ID and Protocol are set up properly.
- To adjust the installation height from the mounting surface, the pipe and coupler should be needed between the surface mount part of the ceiling mount bracket and the camera mount part of the ceiling mount bracket. Note that they are not supplied by the manufacturer.

WIRING AND CABLING



• Port Description

• Main Cable

Port Pin Number (RJ45)	Connector / Wire Color	Signal
1	BNC Connector	Video +
2,4		Video -
5	Red	RS-485 +
3	Yellow	RS-485 -
7	Orange	Power +
6,8	White	Power -

• I/O Cable

Port Pin Number (RJ25)	Wire Color	Signal
1	Blue	IN COM +
2	Yellow	IN 1-
3	Green	IN 2 -
4	Red	IN 3 -
5	Black	OUT A
6	White	OUT B

• Audio Cable

Port Pin Number	Connector/Wire Color	Signal
1	RCA (Yellow)	Audio IN
2		Audio GND
3	RCA (White)	Audio OUT

- **Power Description**

- Carefully check the voltage and current capacity of the rated power. The rated power is indicated in the back of main unit.

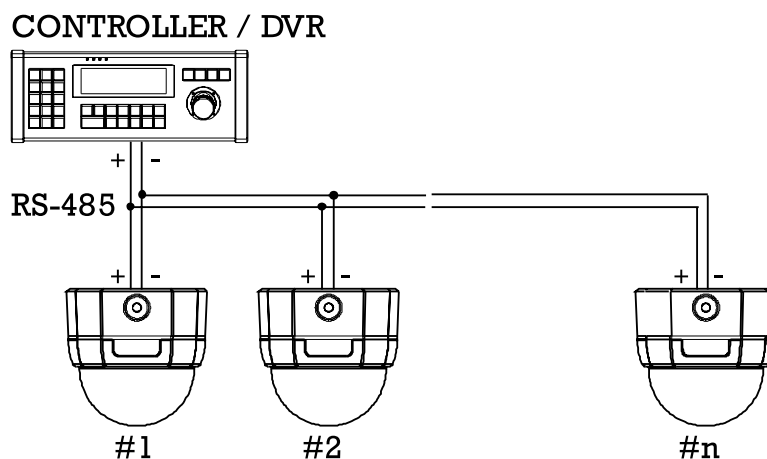
Input Voltage Range	Current Consumption
DC 11V ~ 15V	2,5 A

- For the DC input models, be careful with the polarity of DC power. The system should be permanently damaged by wrong DC input.
- In case that the length of the power wire is very long, there may be voltage drop and the system may not work properly. Make the length of the power wire as short as possible.

- **RS-485 Communication**

- For PTZ control, connect the cable(s) to your keyboard or DVR. To connect multiple cameras to a single controller, RS-485 communication should be connected in parallel as shown below. If you are connecting a single camera to a controller, terminate the camera. When connecting more than one camera to a single controller, terminate the last camera on the communication line. The last camera means the camera farthest in cable length from the controller.

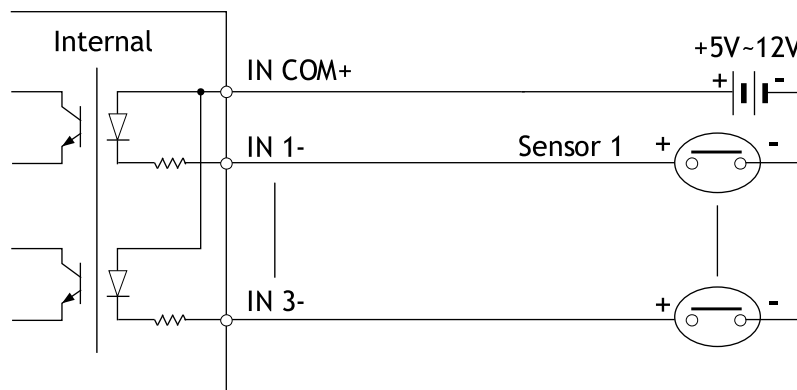
Note that the total length of the communication cable between a controller and the camera(s) on the same communication line must be less than 1.2Km.



- **Video**

- Use BNC coaxial cable only.

- **Alarm Input**



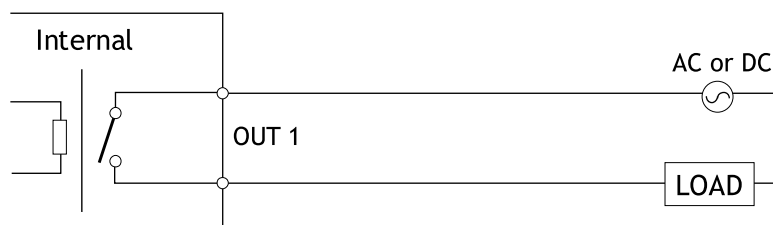
- Before connecting sensors, check driving voltages and output signal types of the sensors. Since output signal types of the sensors are divided into Open Collector type and Voltage Output type in general, the wiring must be done properly after considering those types.

Signal	Description
IN COM+	The electric power source to drive input circuit. Connect the (+) wire of electric power source to drive the Sensors to this port as shown in the above circuit.
IN1 -, IN2 -, IN3 -	Connect the outputs of sensors to each port as shown in the above circuit.

- If you want to use Alarm Input, the types of sensors must be selected in OSD menu. The sensor types are divided into Normal Open and Normal Close. If wrong sensor types are selected, alarms should be activated reversely to sensor inputs.

● Normal Open	Output Voltage is high state when sensor is activated
● Normal Close	Output Voltage is high state when sensor is not activated

- **Relay Output**



- The maximum loads are as follows.

Power Type	DC Power
Maximum Load	MAX. DC 24V, 1A

CHECK POINTS BEFORE OPERATION

- Before turning on the system, check if the wire(s) and cable(s) are connected properly.
- Check if the camera ID on the controller is properly selected. The camera ID must be identical to that of the target camera. The camera ID can be checked by reading the DIP switch of the camera or on OSD.
- If your controller supports multi-protocols, the protocol must be changed to match to that of the camera.
- Adjust the DIP switch after turning off the camera. If you changed the camera protocol by changing the DIP S/W, the change will be effective after you reboot the camera.
- Since the operation method can be different by controllers, refer to your controller manual if the camera can not be controlled properly. The operation of this manual is based on the standard Pelco® Controller.

SPECIFICATIONS

CAMERA PART (391715)	
Video Signal Format	PAL
Image Sensor	1/4" Interline Transfer CCD
Total Pixels	795(H)x596(V) 470K
Effective Pixels	752(H)x582(V) 440K
Horizontal Resolution	500 TV Lines(Color), 570 TV Lines(B/W)
Video Signal-to-Noise	50 dB (AGC Off)
Zoom	x10 Optical Zoom, x10 Digital Zoom
Forcal Length	F1.8, f=3.8~38mm
Angle of View	H : 51.2°(Wide)~5.58°(Tele) / V : 39.3°(Wide)~4.27°(Tele)
Zoom Speed	1.75 sec (Wide to Tele)
Minimum Illuminance	0.7 Lux (Color) / 0. 02 Lux (B/W), 50 IRE
Day & Night	Auto / Day / Night(ICR)
Focus	Auto / Manual / SemiAuto
Iris	Auto / Manual
Shutter Speed	x128 ~ 1/120000 sec
AGC	Normal / High / Off
White Balance	Auto / Manual(Red, Blue Gain Adjustable. 1800°K~10500°K)
BLC	Low / Middle / High / Off
Flickerless	Selectable
SSNR	Low / Middle / High / Off
Privacy Zone	4 Masks, Spherical Coordinate

CAMERA PART	391716	391717
Video Signal Format	PAL	
Image Sensor	1/4" Interline Transfer CCD	
Total Pixels	795(H)x596(V) 470K	
Effective Pixels	752(H)x582(V) 440K	
Horizontal Resolution	550 TV Lines(Color), 680 TV Lines(B/W)	
Video Signal-to-Noise	50 dB (AGC Off)	
Optical Zoom	x27	x37
Digital Zoom	x12	
Forcal Length	F1.6 ~2,9, f=3.5~94,5mm	F1.6 ~3,9, f=3.5~129,5mm
Angle of View (H)	55,5°(Wide)~2,24°(Tele)	55,5°(Wide)~1,59°(Tele)
Angle of View (V)	42,5°(Wide)~1,79°(Tele)	42,5°(Wide)~1,19°(Tele)
Zoom Speed (Wide to Tele)	1.8 sec	2,5 sec
Minimum Illuminance	0.4 Lux (Color) / 0. 02 Lux (B/W), 50 IRE/F1,6	0.7 Lux (Color) / 0. 6 Lux (B/W), 50 IRE/F1,6
Day & Night	Auto / Day / Night(ICR)	
Focus	Auto / Manual / SemiAuto	
Iris	Auto / Manual	
Shutter Speed	x256 ~ 1/120000 sec	
AGC	Low/Middle/High/Manual/Off	
White Balance	Auto / Manual(Red, Blue Gain Adjustable. 1800°K~10500°K)	
BLC	BLC/HLC/Off	WDR/BLC/HLC/Off
Flickerless	Selectable	
SSNR	Low / Middle / High / Off	
Stabilization	ON/OFF	
Privacy Zonez	8 Masks, Spherical Coordinate	

MECHANISM PART		
Movement Range	Pan	360°(Endless)
	Tilt	90°
Speed	Preset	360°/sec.
	Jog	0.05 ~ 360°/sec. (Proportional to Zoom)
	Swing	1~ 180°/sec.
Preset		127 Presets (Label, Independent Camera Parameter Setting)
Pattern		4 Patterns [1200 Commands(Approx. 5 Minute) / Pattern]
Swing		8 Swings
Group		8 Groups (MAX. 20 Actions with The Combination of Preset, Pattern and Swing)
Other Pan/Tilt Functions		Auto Flip, Auto Parking, Power Up Action and etc.
Communication		RS-485
Protocol		Pelco-D, Pelco-P Selectable
OSD		English, Menu / PTZ information etc
Sensor Input		3 Inputs, Photo-Coupler Type, DC 5V~12V
Alarm Outputs		1 Output, Relay Output, MAX. Load DC24V 1A
Fan		Always ON
Heater		Operation Start from Internal Temperature 10°C
Operation Temperature		0°C ~ 50°C (391 695 Model)

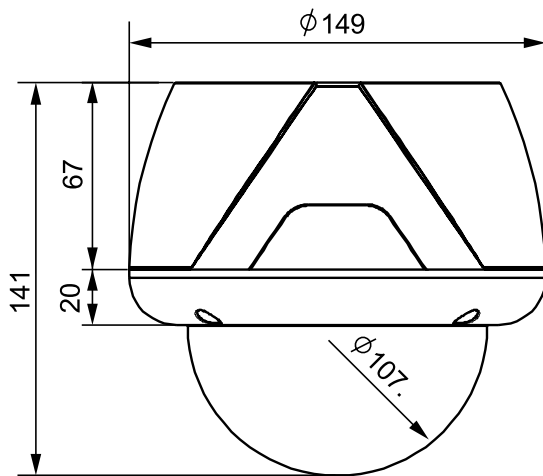
MECHANICAL					
		391715 Model		391716/391717 Models	
		Ceiling Mount	Wall Mount	Ceiling Mount	Wall Mount
Material	Dome	Polycarbonate			
	Internal	Polycarbonate, ABS			
	External	Aluminium			
Dome Size		Ø 107,5 mm/ Ø 4,2”		Ø 150 mm/ Ø 5,9”	
Dimension		158,2 x 216 mm	274,5 x 227,3 mm	Ø 192 x 265,3 mm	296 x 276,6 mm
Weight (kg)		Approx 2,6	Approx 2,8	Approx 3,2	Approx 3,8

[Note]

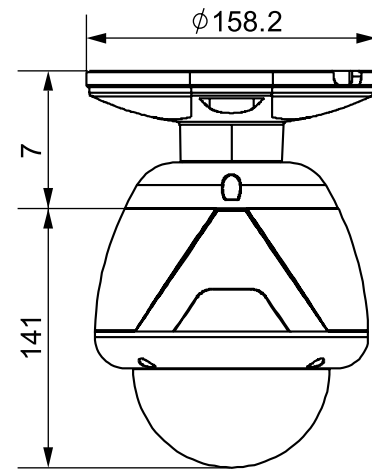
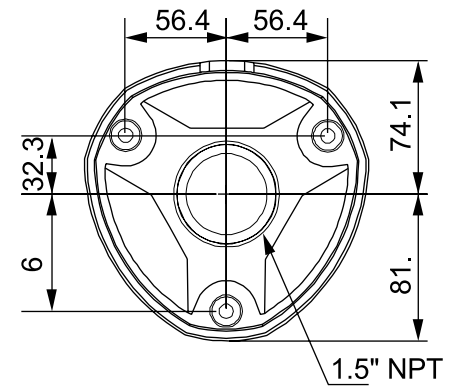
Check the voltage and current capacity of rated power carefully.

DIMENSION (691715 Model)

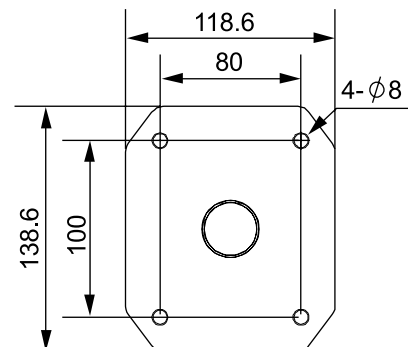
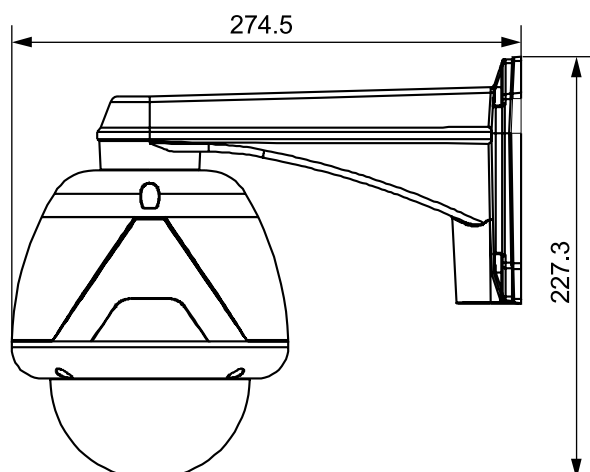
• Main Body



• Ceiling Mount Type

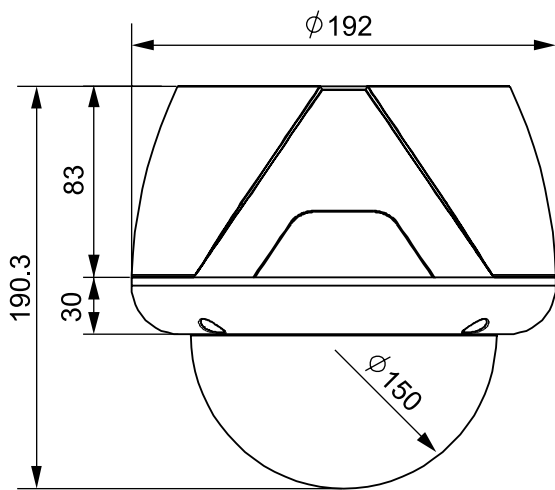


• Wall Mount Type

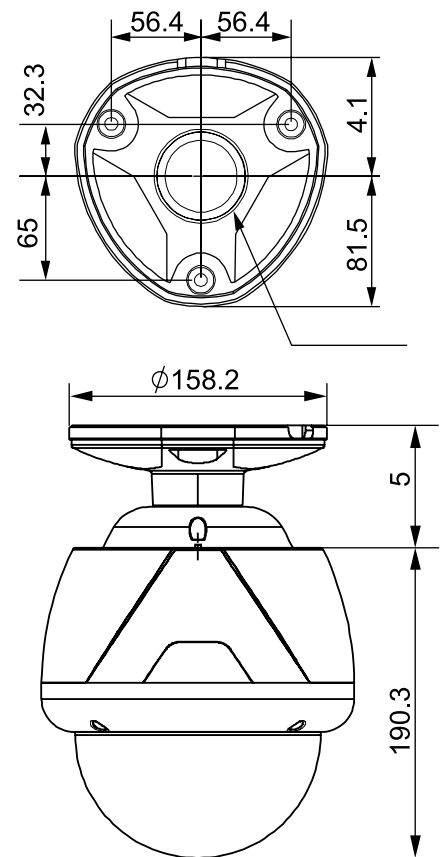


DIMENSION (6917116/ 3917117 Models)

• Main Body



• Ceiling Mount Type



• Wall Mount Type

